INDEX TO VOLUME L.*

A

Adams, F. D., the Laurentian of Canada, 58.
Agassiz, A., underground temperatures at great depths, 503.
Agricultural analysis, Wiley, 431.
Aluminium, wave length of ultra-violet lines of, Runge, 71.
Angot, A., les aurores polaires, 509.
Appalachian gold fields, Becker, 425.
Argon, see CHEMISTRY.
Asphaltum from Trinidad, Peckham, 33.
Association, American, meeting at Springfield, 79, 352.
British, meeting at Ipswich, 429.
Auditoriums, key note of, Cutter, 449.
Aurores polaires, Angot, 509.

B

Bauer, L. A., Secular variation of terrestrial magnetism, 109, 189, 314.
Bigelow, F. H., the earth a magnetic shell, 81.
Boltwood, B. B., double salts of cæsium chloride, etc., 249.
Bonaparte, R., an excursion in Corsica, 509.
Botanical garden, Missouri, annual report, 507.
BOTANY—
Chalazogamy, Nawaschin, 429.
Flowers of Field and Garden, Matthews, 78.
Galápagos flora, Robinson and Greenman, 135.
Genus Lamourouxia, Robinson and Greenman, 169.
Kewensis, Index, 508.
Mexican plants, Robinson and Greenman, 150.
Pflanzenfamilien, die natürlichen, Engler, 78.
Synoptical flora of North America, vol. i, 428.
Brewer, W. H., Daniel Cady Eaton, 184.
Brögger, W. C., Eruptivgesteine des Kristianiagebietes, 348.

C

Cambridge Natural History, vol. iii, molluscs, 79.
Canada geol. survey, 347.
Carbon of the electric oven, spectrum, Deslandres, 501.
Caustics, demonstration, Wood, 301.
Cayeux, L., pre-Cambrian organisms, 267.
CHEMISTRY—
Alcohol, dehydrating, Wislicenus and Kaufmann, 499.
Ammonium-cuprous double halogen salts, Wells and Hurlburt, 390.
Argon, correction to paper on, Hill, 70.
fluorescence, Berthelot, 264.
physical properties, Rayleigh, 264.
specific refraction, 416.
and helium, Hill, 359; Bouchard, 501.
in meteoric iron, Ramsay, 264.
refractivity and viscosity, Rayleigh, 413.
Boron, amorphous, Moissan, 499.
Cæsium chloride, double salts of, etc., Wells and Boltwood, 249.
Carbon dioxide, determination, Gooch and Phelps, 101.
in meteoric irons, Moissan, 499.
Compounds containing lead and extra iodine, Wells, 21.
Halogens in mixed silver salts, Gooch and Fairbanks, 27.
Helium, Ramsay, Collie and Travers, 259.
compound nature of, from cleveite, Runge and Paschen, 413.
line, wave length of the D_3, Palmer, 357.
spectrum, Crookes, 302.

* This Index contains the general heads, BOTANY, CHEMISTRY, GEOLOGY, MINERALS, OBITUARY, ROCKS, and under each the titles of Articles referring thereto are mentioned.

INDEX TO VOLUME L.*

A

Adams, F. D., the Laurentian of Canada, 58.
Agassiz, A., underground temperatures at great depths, 503.
Agricultural analysis, Wiley, 431.
Aluminium, wave length of ultra-violet lines of, Runge, 71.
Angot, A., les aurores polaires, 509.
Appalachian gold fields, Becker, 425.
Argon, see CHEMISTRY.
Asphaltum from Trinidad, Peckham, 33.
Association, American, meeting at Springfield, 79, 352.
British, meeting at Ipswich, 429.
Auditoriums, key note of, Cutter, 449.
Aurores polaires, Angot, 509.

B

Bauer, L. A., Secular variation of terrestrial magnetism, 109, 189, 314.
Bigelow, F. H., the earth a magnetic shell, 81.
Boltwood, B. B., double salts of cæsium chloride, etc., 249.
Bonaparte, R., an excursion in Corsica, 509.
Botanical garden, Missouri, annual report, 507.
BOTANY—
Chalazogamy, Nawaschin, 429.
Flowers of Field and Garden, Matthews, 78.
Galápagos flora, Robinson and Greenman, 135.
Genus Lamourouxia, Robinson and Greenman, 169.
Kewensis, Index, 508.
Mexican plants, Robinson and Greenman, 150.
Pflanzenfamilien, die natürlichen, Engler, 78.
Synoptical flora of North America, vol. i, 428.
Brewer, W. H., Daniel Cady Eaton, 184.
Brögger, W. C., Eruptivgesteine des Kristianiagebietes, 348.

C

Cambridge Natural History, vol. iii, molluscs, 79.
Canada geol. survey, 347.
Carbon of the electric oven, spectrum, Deslandres, 501.
Caustics, demonstration, Wood, 301.
Cayeux, L., pre-Cambrian organisms, 267.
CHEMISTRY—
Alcohol, dehydrating, Wislicenus and Kaufmann, 499.
Ammonium-cuprous double halogen salts, Wells and Hurlburt, 390.
Argon, correction to paper on, Hill, 70.
fluorescence, Berthelot, 264.
physical properties, Rayleigh, 264.
specific refraction, 416.
and helium, Hill, 359; Bouchard, 501.
in meteoric iron, Ramsay, 264.
refractivity and viscosity, Rayleigh, 413.
Boron, amorphous, Moissan, 499.
Cæsium chloride, double salts of, etc., Wells and Boltwood, 249.
Carbon dioxide, determination, Gooch and Phelps, 101.
in meteoric irons, Moissan, 499.
Compounds containing lead and extra iodine, Wells, 21.
Halogens in mixed silver salts, Gooch and Fairbanks, 27.
Helium, Ramsay, Collie and Travers, 259.
compound nature of, from cleveite, Runge and Paschen, 413.
line, wave length of the D_3, Palmer, 357.
spectrum, Crookes, 302.

* This Index contains the general heads, BOTANY, CHEMISTRY, GEOLOGY, MINERALS, OBITUARY, ROCKS, and under each the titles of Articles referring thereto are mentioned.

Hydrogen peroxides, color, etc., of, Spring, 343.
Mercuric sulphide, change of black to red, Spring, 342.
Perchlorates, Kreider, 287.
Selenic acid, reduction by hydrochloric acid, Gooch and Evans, 400.
reduction by potassium bromide in acid solution, Gooch and Scoville, 402.
Selenious acid determined by potassium permanganate, Gooch and Clemons, 51.
Selenium, reduction of the acids of, by hydriodic acid, Gooch and Reynolds, 254.
Tin tetrachloride and tetrabromide, Lorenz, 500.
Clarke, F. W., jade-like garnet from California, 76.
Clemons, C. F., determination of selenious acid by potassium permanganate, 51.
Color photography, Wiener, 417.
Conductivity of rocks for heat, Kelvin and Murray, 419; Peirce and Willson, 435.
Connecticut, wooded area, map, 431.
Corsica, Bonaparte, 509.
Crookes, W., spectrum of helium, 302.
Cross, W., Laccolitic Mt. groups of Colorado, Utah and Arizona, 74.
Crystallography, N. Story-Maskelyne, 507.
Cutter, E., Key note of auditoriums, 449.

D

Dana, E. S., Minerals and how to study them, 274.
Duane, W., velocity of electric waves, 104.

E

Eakle, A. S., so-called schneebergite, 244.
Earth, the, a magnetic shell, Bigelow, 81.
Edwards, A. M., Tertiary clay on Long Island, N. Y., 270; ornithichnites from the Newark sandstone, N. J., 346.
Electric aureole, Lehmann, 418.
Electric refractor of liquids, Drude, 418.
waves, double refraction, Lebedew, 419.
in ice, double refraction, Biernacki, 418.
velocity, Trowbridge and Duane, 104.
Electrical resonance, Bjerknes, 71.
Electro-magnetic theory, Pupin, 326.
Electrolysis of a liquid, indirect, Andreoli, 344.
Evans, P. S., Jr., reduction of selenic acid by hydrochloric acid, 400.

F

Fairbanks, C., estimation of halogens in mixed silver salts, 27.
Fairchild, H. L., glacial lake in the Genesee valley, 345.
Fletcher, L., Study of Rocks, 426.
Foote, W. M., leadhillite pseudomorphs in Missouri, 99; northupite, 480.

G

Gage, A. P., Principles of Physics, 265.
Geologic map of New York State, 505; United States, 504.
Geological Society of America, Springfield meeting, 348.
Géologie comparée, Meunier, 348.
Geology, doctorate theses, 73.
Geological Reports and Survey—
Canada, 347.
Georgia, 350.
Michigan, 71.
Minnesota, 72.
Missouri, 347.
United States, 423.
Geology—
Aegina and Methana, petrographical sketch, Washington, 74.
Baptanodon beds, reptilia, Marsh, 405.
Coal measures of Kansas, stratigraphy, Keyes, 239; Haworth, 452.
Comanche series in Kansas, Oklahoma and New Mexico, Hill, 205.
Dinosaurs, classification, Marsh, 483.
restoration of some European, Marsh, 407.
tracks of, in New Jersey, Woodworth, 481.

Glacial Genesee Lakes, Fairchild, 345.
Gold fields of the So. Appalachians, Becker, 425.
Laccolitic Mt. groups of Colorado, Utah and Arizona, Cross, 74.
Laurentian, the, Adams, 58.
Moraines, correlation of New York, with raised beaches of Lake Erie, Leverett, 1.
Ornithichnites from the Newark sandstone, N. J., Edwards, 346.
Petroleum, asphaltum and bitumen, Jaccard, 509.
Post-glacial submergence, central Michigan and the, Mudge, 442.
Pre-Cambrian organisms, Cayeux, 267.
Protolenus fauna, Matthew, 265.
Reptilian remains from the triassic of No. California, Merriam, 55.
Sandstone, columnar, Milne Curran, 425.
Shasta region of California, metamorphic series, Smith, 346.
Tertiary clay on Long Island, N. Y., Edwards, 270.
Triassic of No. California, reptilian remains, Merriam, 55.
Gooch, F. A., estimation of halogens in mixed silver salts, 27; determination of selenious acid by potassium permanganate, 51; determination of carbon dioxide, 101; reduction of the acids of selenium by hydriodic acid, 254; reduction of selenic acid by hydrochloric acid, 400; reduction of selenic acid by potassium bromide in acid solution, 402.
Greenman, J. M., contributions from the Gray Herbarium of Harvard Univ., 135.
Groth, P., Physical Crystallography, 77.

H

Harker, A., Petrology for Students, 425.
Haworth, E., stratigraphy of Kansas coal measures, 452.
Helium, see CHEMISTRY.
Hill, E. A., correction to paper on argon, 70; argon and helium, 359.
Hill, R. T., Comanche series in Kansas, Oklahoma and New Mexico, 205.
Hillebrand, W. F., calaverite, Cripple Creek, Colorado, 128, 426.
Hobbs, W. H., mineralogical notes 121; mineralogy of Wisconsin, 427
Hodgkins fund prizes, report of the Committee of Award, 275.
Hoffmann, G. C., plumbiferous tetrahedrite, 273.
Howell, E. E., two new meteorites, 252.
Hurlburt, E. B., ammonium cuprous double halogen salts, 390.

I

Iowa Academy of Sciences, 356.

J

Judd, composite dikes of Arran, 270.

K

Kansas Coal Measures, stratigraphy, Keyes, 239; Haworth, 452.
Kathode rays, absorption, Lenard, 503.
Kelvin, Lord, thermal conductivity of rocks, 419.
Keyes, C. R., stratigraphy of the Kansas coal measures, 239.
Kreider, D. A., forms of laboratory apparatus, 133; determination of perchlorates, 287.

L

Laboratory apparatus, Kreider, 133.
Leverett, F., correlation of New York moraines, 1.
Liversidge, A., minerals from New South Wales, 426.

M

Magnetic field of the earth, Bigelow, 81.
Magnetism of asbestos, Bleekrode, 418.
secular variation of terrestrial, Bauer, 109, 189, 314.
Marbles of Georgia, McCallie, 350.
Marsh, O. C., Thomas Henry Huxley, 177; reptilia of the Baptanodon beds, 405; restoration of some European Dinosaurs, 407: classification of Dinosaurs, 483.
Matthew, G. F., the Protolenus fauna, 265.
Matthews, F. S., Familiar Flowers of Field and Garden, 78.

Merriam, J. C., reptilian remains from the triassic of No. Calif, 55.
Meteoric iron containing argon and helium, Ramsay, 264: carbon, Moissan, 499.
Meteorite collection, Field Columbian Museum, Farrington, 427.
Meteorites, two new, Howell, 252.
Meunier, S., La Géologie Comparée, 348.
Michigan geol. survey, 71.
Mineral Industry in the U. S., Rothwell, 427.
Minerals and how to study them, Dana, 274.
Minerals, separation, of high specific gravity, Penfield, 447.
MINERALS—
Ægirite-augite, Montana, 396. Apatite, Canaan. Conn., 128. Asbestus, magnetism of, 418.
Barite, Michigan, 123. Boleite, New South Wales, 426.
Calaverite, Cripple Creek, Colorado, 128, 426. Cerussite, Montana, 121. Chloritoid, Michigan, 125. Chondrodite, Sweden, 350. Clinohumite, Sweden, 350. Copper in western Idaho, Packard, 298.
Dietzeite, Chili, 76.
Elpidite, Greenland, 76.
Fluorite, Montana, 396.
Garnet resembling jade, Calif, 76.
Hessonite, Canaan, Conn., 128.
Humite, Sweden, 350.
Lawsonite, Marin Co., Cal., 75. Leadhillite pseudomorphs, Missouri, 99. Lithiophilite, optical properties, 387. Lossenite, Greece, 76.
Manganite, Michigan, 124. Minervite, France, 76. Monazite, Manhattan Island, 75.
Nantokite, New South Wales, 426. Northupite, 480.
Prolectite, Sweden, 350. Pseudoleucite, Montana, 395.
Quartz crystals, twisted, Tschermak, 351.
Retzian, Nordmark, 350.
Schneebergite, so-called, 244. Sodalite, Montana, 396. Sulphur, native, Michigan, 246.
Tetrahedrite, plumbiferous, British Columbia, 273. Triphylite, optical properties, 387.
Urbanite, Sweden, 76, 351.
Webnerite, Bolivia, 76.
Xenotime, Manhattan Island, 75.
Minnesota, geol. survey, 72.
Missouri Botanical Garden, annual report, 507.
geol. survey, 347.
Montana phonolitic rocks, Pirsson, 394; Weed, 506; igneous rocks, Weed and Pirsson, 467.
Mudge, E. H., Central Michigan and the post-glacial submergence, 442.
Murray, J. R. E., thermal conductivity of rocks, 419.
Muthmann, W., so-called schneebergite, 244.

N

New York state geologic map, 505.
Niven, W., xenotime, monazite, etc., on Manhattan Island, 75.
North America, Lakes of, Russell, 506.

O

OBITUARY—
Blake, E. W., 434.
Eaton, Daniel Cady, 184.
Foote, A. E., 434.
Huxley, Thomas Henry, 177.
Norwood, J. G., 79.
Pasteur, L., 434.
Riley, C. V., 356, 432.
Optics, recent progress, Stevens, 277, 377.

P

Packard, R. S., copper in Western Idaho, 298.
Palæontologie, Grundzüge der, von Zittel, 268.
Palmer, A. De F., Jr., wave length of the D_3 helium line, 357.
Peckham, S. F., Pitch Lake of Trinidad, 33.
Peirce, B. O., thermal conductivities of marble and slate, 435.
Penfield, S. L., optical properties of lithiophilite, etc., 387; separation of minerals of high specific gravity, 447.
Petrology for students, Harker, 425.
Phelps, I. K., determination of carbon dioxide, 101.
Photography, color, Wiener, 417; by indirect methods, Lumière, 501.
Physical Crystallography, Groth, 77.
Physics, Principles of, Gage, 265.
Pirsson, L. V., complementary rocks and radial dikes, 116; igneous rocks of Montana, 309, 467: phonolitic rocks from Montana, 394.

Porosity of solid bodies for the light ether, Zehnder, 70.
Pratt, J. H., optical properties of lithiophilite and triphylite, 387.
Pupin, M. I., electro-magnetic theory, 326.

R

Ramsay, argon and helium, 264.
Reyer, Geologische experimente, 74.
Reynolds, W. G., reduction of the acids of selenium by hydriodic acid, 254.
Robinson, B. L., contributions from the Gray Herbarium of Harvard Univ., 135.
Rock conductivity for heat, Kelvin and Murray, 419; Peirce and Willson, 435.
Rock specimens, directions for collecting, 349.
Rocks, study of, Fletcher, 426.
Rocks—
Complementary and radial dikes, Pirsson, 116.
Composite dikes of Arran, Judd, 270.
Gneisses of the Laurentian, Adams, 64.
Eruptive rocks of Christiania, Brögger, 348,
Marble, thermal conductivity, 435.
Minette, 313.
Phonolites, etc., of Montana, Pirsson, 394; Weed, 506.
Syenite, Montana, 470.
Quartz diorite porphyrite, 311.
Quartz syenite porphyry, 311.
Shonkinite, Montana, 473.
Yogoite, Montana, 473.
Rothwell, R. P., Mineral Industry in U. S., 427.
Russell, I. C., Lakes of North America, 506.

S

Scientific Societies' publications, uniformity of size of pages, 431.
Scoville, W. S., reduction of selenic acid by potassium bromide in acid solution, 402.
Sherzer, W. H., native sulphur in Michigan, 246.
Silica, Native, Wright, 274.
Silicates, constitution, Clarke, 274.
Smith, J. E., metamorphic series of the Shasta region of California, 346.
Stevens, W. LeC., recent progress in optics, 277, 377.
Story-Maskelyne, N., Crystallography, 507.

T

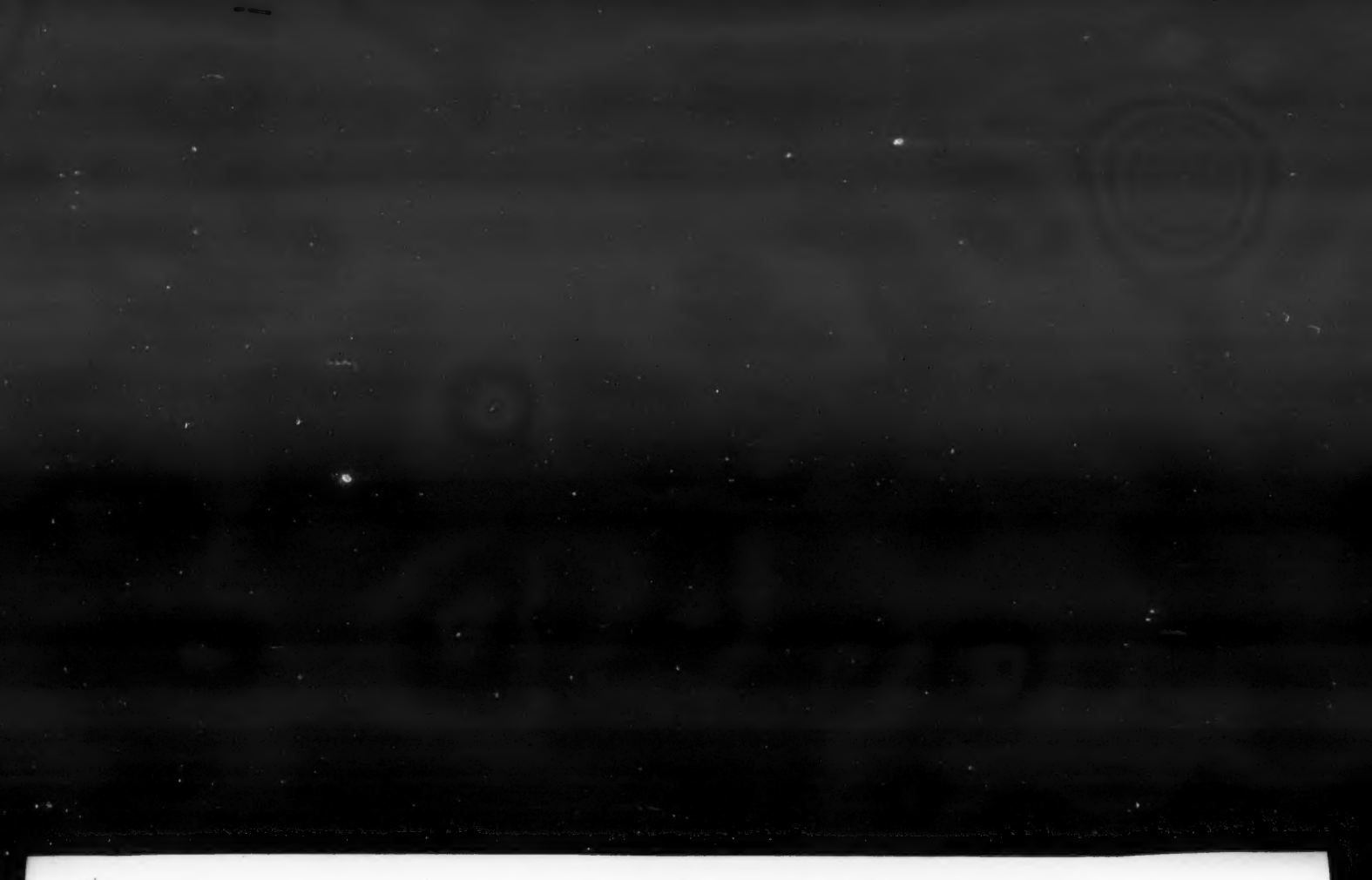
Temperatures, measurements of high, Holborn and Wien, 502.
underground, Agassiz, 503.
Thunderstorms, origin, Smith, 430.
Trinidad, Pitch Lake of, Peckham, 33.
Trowbridge, J., velocity of electric waves, 104.

U

United States, geological atlas, 504; geol. survey, 423.

V

Von Zittel, K. A., Grundzüge der Palæontologie, 268.

W

Waldo, F., diurnal rise and fall of the wind in the U. S., 235.
Weed, W. H., igneous rocks of Montana, 309, 467; phonolitic rocks from Montana, 506.
Wells, H. L., compounds containing lead and extra iodine, 21; double salts of cæsium chloride, etc., 249; ammonium cuprous double halogen salts, 390.
Wiley, H. W., Agricultural Analysis, 431.
Willson, R. W., thermal conductivities of marble and slate, 435.
Wind in the U. S. diurnal, rise and fall, Waldo, 235.
Wood, R. W., demonstration of caustics, 301.
Woodworth, J. B., dinosaur tracks in New Jersey, 481.
Wright, B., Native Silica, 274.